

DAE
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PTO/SB/21 (09-04)

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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	10/694,973-Conf. #4439
	Filing Date	October 28, 2003
	First Named Inventor	Raymond Zagranski
	Art Unit	3661
	Examiner Name	D. Tran
Total Number of Pages in This Submission	Attorney Docket Number	58917DIV(49366)

ENCLOSURES (Check all that apply)		
<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> After Final	<input checked="" type="checkbox"/> Petition to Withdraw Holding of Abandonment; 37 C.F.R. 1.181	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Terminal Disclaimer	<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Request for Refund	Copy of Amendment with 2-month extension of time mailed Sept. 16, 2004;
<input type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> CD, Number of CD(s) _____	Copy of Return Receipt Postcard date stamped by the PTO on Sept. 20, 2004;
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> Landscape Table on CD	Copy of Supplemental Amendment mailed to the PTO on June 22, 2005.
<input type="checkbox"/> Reply to Missing Parts/Incomplete Application	Remarks	
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Firm Name	EDWARDS & ANGELL, LLP		
Signature			
Printed name	David J. Silvia		
Date	August 17, 2005	Reg. No.	49,036

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail, in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below.

Dated: August 17, 2005

Signature: (Edith Sillman)



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:

ZAGRANSKI et al.

Serial No.: 10/694,973

Filed: October 28, 2003

Group Art Unit: 3661

Examiner: Dalena Tran

For: **FUEL CONTROL SYSTEM FOR GAS TURBINE ENGINES**

Mail Stop Petition
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

CERTIFICATE OF MAILING

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Mail Stop Petition, Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450 on Aug. 17, 2005.

By: Edith D. Sillman
Edith D. Sillman

PETITION TO WITHDRAW HOLDING OF ABANDONMENT; 37 C.F.R 1.181

Sir/Madam:

This is a Petition under Rule 1.181 for withdrawal of the Examiner's holding of abandonment in the above-captioned matter.

STATEMENT OF FACTS

1. A Notice of Abandonment was mailed on June 30, 2005 and received by Applicants on July 5, 2005. The Notice stated that Applicants had failed to timely file a

proper reply to an Office Action letter mailed on April 20, 2004.

2. On April 22, 2004, Applicants received a non-final office action which was mailed by the U.S. Patent and Trademark Office on April 20, 2004.

3. A response to the April 20, 2005, Office Action was mailed to the Commissioner for Patents on September 16, 2004 along with a request for a two-month extension of time. A copy of Applicants' "Amendment" response is attached herewith.

4. The September 16, 2004 response to the outstanding office action was accompanied by a return receipt postcard, which was date-stamped by the Patent Office with a date of September 20, 2004 and returned to our office (received on September 27, 2004). A copy of the return receipt postcard is also attached herewith.

5. On June 22, 2005 Applicants filed a Supplemental Amendment to the above-identified application. A copy of the Supplemental Amendment is also attached herewith.

6. The next communication received by Applicants concerning the above-identified application was the June 30, 2005 Notice of Abandonment.

RELIEF REQUESTED

Applicants respectfully request the Commissioner, based on the following arguments, withdraw the holding of abandonment and enter the enclosed "Amendment" and "Supplemental Amendment" into the record.

ARGUMENT

This petition and related enclosures are being filed within two (2) months of the mailing date of the Notice of Abandonment. Accordingly, the petition is considered to be

timely filed (37 C.F.R. 1.181(f)).

MPEP 711.04(c) provides that a petition to withdraw the holding of abandonment may be adequate relief when a response with a certificate of mailing has been filed by an applicant but was not received or acknowledged. The MPEP also suggests that a Petition to revive is not required in these circumstances. The foregoing is believed to be applicable to the facts relating to the abandonment of the subject application.

In the instant case, Applicants filed a response to the outstanding action on September 16, 2004, as evidenced by the enclosed Amendment and Transmittal. As such, a response to the office action dated April 20, 2004 was timely filed by Applicants because it was filed before the expiration of statutory period.

The mailroom of the Patent Office also acknowledged receipt of the Amendment as evidenced on the enclosed copy of the self addressed postcard. Thus, the actual receipt date by the Patent Office of the Amendment is before the expiration of the statutory period.

In sum, a response to the office action dated April 20, 2004, was timely filed by Applicants. Thus, the abandonment of the subject application appears to be a result of an error by the Patent Office, namely loss of the amendment and transmittal form.

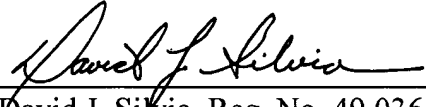
REQUIRED FEE

There is no fee required for the submission of the within Petition under Rule 181. Moreover, a fee is not believed to be required for the consideration of the within Petition because the petition addresses an error of the Patent Office. However, if for any reason a fee is required for the consideration of the within Petition, a fee paid is inadequate or credit

is owed for any excess fee paid, you are hereby authorized and requested to charge Deposit
Account No. 04-1105.

Respectfully submitted,

Date: August 17, 2005



David J. Silvia, Reg. No. 49,036
Attorney for Applicants
Edwards & Angell LLP
P.O. Box 55874
Boston, MA 02205
Tel: (203) 353-6839
Fax: (888) 325-1560




Mailing Date: Sept. 16, 2004 Attorney/Sec: David J. Silvia/es
Client: GPECS Docket No.: (49366) 58917 DIV
Inventors: Zagranski et al.
Serial No.: 10/694,973 Patent No.:
Filing Date: Oct. 28, 2003 Grant Date:

The dating stamp of the Patent and Trademark Office hereon will be taken as the date of filing of:

Combined Amendment & Petition for Extension of Time (Large Entity)
Amendment
Check in the amount of \$420.00 (2 month extension of time)
Certificate of Mailing

Due Date: September 20, 2004 (2 month extension of time)

ORIGINAL DOCUMENT PRINTED ON CHEMICAL REACTIVE PAPER WITH MICROPRINTED BORDER. SEE REVERSE SIDE FOR COMPLETE SECURITY FEATURES.

Edwards & Angell  www.fleet.com No. **951528**

Three Stamford Plaza, 30 Tesser Boulevard, Stamford, CT 06901 52-36/112

Fee - Two-month Extension of Time CHECK DATE: September 16, 2004 CHECK NO: 951528

Serial No. 10/694,973

Docket: (49366) 58917 DIV CHECK AMOUNT: \$420.00

FOUR HUNDRED TWENTY AND 00/100 DOLLARS

PAY TO: Commissioner of Patents & Trademarks

OF

Stamford Main Account
Two Signatures Required For Amounts Exceeding \$2000.00
VOID IF 180 DAYS OR OLDER

Vincent M. [Signature]

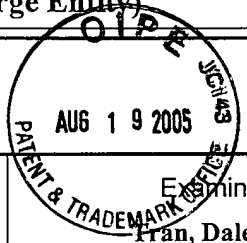
THIS DOCUMENT CONTAINS HEAT SENSITIVE INK. TOUCH OR PRESS HERE. RED IMAGE DISAPPEARS WITH HEAT.

951528 01120036593550 27633

**COMBINED AMENDMENT & PETITION FOR EXTENSION OF
TIME UNDER 37 CFR 1.136(a) (Large Entity)**

Docket No.
(49366) 58917 DIV

In Re Application Of: **Raymond D. ZAGRANSKI, et al.**



Serial No.
10/694,973

Filing Date
October 28, 2003

Examiner
Fran, Dalena

Group Art Unit
3661

Invention: **FUEL CONTROL SYSTEM FOR GAS TURBINE ENGINES**

TO THE COMMISSIONER FOR PATENTS:

This is a combined amendment and petition under the provisions of 37 CFR 1.136(a) to extend the period for filing a response to the Office Action of April 20, 2004 in the above-identified application.
Date

The requested extension is as follows (check time period desired):

☐ One month ☒ Two months ☐ Three months ☐ Four months ☐ Five months

from: July 20, 2004 until: September 20, 2004
Date *Date*

The fee for the amendment and extension of time has been calculated as shown below:

CLAIMS AS AMENDED

	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST # PREV. PAID FOR	NUMBER EXTRA CLAIMS PRESENT	RATE	ADDITIONAL FEE
TOTAL CLAIMS	10 -	20 =	0	x \$18.00	\$0.00
INDEP. CLAIMS	2 -	3 =	0	x \$86.00	\$0.00
FEE FOR AMENDMENT					\$0.00
FEE FOR EXTENSION OF TIME					\$420.00
TOTAL FEE FOR AMENDMENT AND EXTENSION OF TIME					\$420.00

**COMBINED AMENDMENT & PETITION FOR EXTENSION OF
TIME UNDER 37 CFR 1.136(a) (Large Entity)**

Docket No.
(49366) 58917 DIV

The fee for the amendment and extension of time is to be paid as follows:

- ☒ A check in the amount of **\$420.00** for the amendment and extension of time is enclosed.
- ☐ Please charge Deposit Account No. _____ in the amount of _____
- ☒ The Director is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No. **04-1105**
- ☒ Any additional filing fees required under 37 C.F.R. 1.16.
- ☒ Any patent application processing fees under 37 CFR 1.17.
- ☒ If an additional extension of time is required, please consider this a petition therefor and charge any additional fees which may be required to Deposit Account No. **04-1105**


Signature

Dated: September 16, 2004

David J. Silvia, Reg. No. 49,036
Attorney/Agent for Applicants
EDWARDS & ANGELL, LLP
P.O. Box 55874
Boston, MA 02205
Telephone: (203) 353-6839
FAX: (888) 325-1560

I certify that this document and fee is being deposited on Sept. 16, 2004 with the U.S. Postal Service as first class mail under 37 C.F.R. 1.8 and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.


Signature of Person Mailing Correspondence

Edith D. Sillman

Typed or Printed Name of Person Mailing Correspondence

CC:



Attorney Ref. No. 58917DIV

PATENT

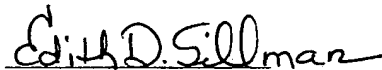
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Zagranski, et al. Confirmation No.: 4439
U.S. Serial No. 10/694,973 Examiner: Tran, Dalena
Filed: October 28, 2003 Group Art Unit: 3661
For: **FUEL CONTROL SYSTEM FOR GAS TURBINE ENGINES**

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop: Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date indicated below.

Date: September 16, 2004


Edith D. Sillman

Mail Stop: Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT

Sir:

Applicants are in receipt of the Office Action dated April 20, 2004, concerning the above-referenced application. Please enter the remarks as set forth hereinbelow:

REMARKS

Claims 12-21 are pending in the present application and stand rejected. In the Office Action, the Examiner rejected claims 12-16 and 19-20 based on 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 3,777,480 to Stoltman, in view of U.S. Patent No. 3,777,479 to Hagen.

The Stoltman patent discloses a fuel control system for gas turbine engines which is particularly suited for use with engines of the gas-coupled type (e.g. vehicle propulsion). The disclosed system receives an input of the gas generator speed N_2 and an input of the compressor discharge pressure 102 for use in positioning valve groups 67 and 68 of fuel control system 22, respectively.

The Hagen patent discloses a control system for gas turbines which include a gas generator associated with variable geometry unit such as variable stator guide vanes positioned upstream of the free power turbine. The Hagen control system adjusts the working line of the gas generator to each related speed by variation of the geometry in order to avoid the compressor surge line.

In contrast, independent claim 12 of the present application recites a fuel control method for gas turbines having a compressor and a gas generator which includes the steps of:

- a) measuring a plurality of engine operating parameters;
- b) determining an initial engine fuel demand based on the plurality of measured engine operating parameters;
- c) **estimating during engine operation and based on the plurality of measured operating parameters, an amount of heat transferred between fuel combustion gases and engine metal;**

- d) estimating an effective fuel flow adjustment based on the estimated heat transfer between the combustion gases and the engine metal; and
- e) determining a final engine fuel demand based on the initial engine fuel demand and the estimated effective fuel flow adjustment.

Neither Stoltman nor Hagen disclose a fuel control system which adjusts the initial fuel demand that has been determined based on engine operating parameters, such as gas generator speed and compressor discharge pressure, to account for real-time thermodynamic engine effects. More specifically, neither of these references teach, suggest or disclose, either alone or in combination, a fuel control system that estimates during engine operation and based on the plurality of measured operating parameters, an amount of heat transferred between fuel combustion gases and engine metal. Nor do these references teach suggest or disclose a fuel control system which estimates an effective fuel flow adjustment based on the estimated heat transfer between the combustion gases and the engine metal and then determines a final engine fuel demand based on the initial engine fuel demand and the estimated effective fuel flow adjustment.

In the Office Action, the Examiner suggested that Hagen discloses at column 6, lines 46 to column 7, line 40, a means for estimating, during engine operation and based on a plurality of measure operating parameters and amount of heat transferred between fuel combustion gases and the engine metal. Applicants have thoroughly reviewed Hagen with specific emphasis on the cited text, and have found no teaching, suggestion or disclosure which concerns the accounting for the heat transferred between the combustion gases and the engine metal. Still further, Applicants have also reviewed the cited text which the Examiner suggests disclose a fuel control system which estimates an effective fuel flow adjustment based on the estimated heat transfer

between the combustion gases and the engine metal and then determines a final engine fuel demand based on the initial engine fuel demand and the estimated effective fuel flow adjustment and also finds these citations in Hagen to be absent such a teaching, suggestion or disclosure.

Therefore, it is respectfully submitted that claim 12 and all of the claims depending therefrom, namely claims 13-21, distinguish the present invention over Stoltman and Hagen, and withdrawal of the rejection is respectfully requested.

Claim 17 was rejected by the Examiner under 35 U.S.C. § 103(a) as being unpatentable over Stoltman and Hagen, as applied to claim 12 above, in further view of U.S. Patent No. 4,545,198 to Yoshida. Applicants note that the Yoshida patent does not cure the deficiencies of Stoltman and Hagen identified above with respect to claim 12. In particular, Yoshida does not disclose, suggest or teach a fuel control system that estimates during engine operation and based on the plurality of measured operating parameters, an amount of heat transferred between fuel combustion gases and engine metal. Nor does Yoshida teach, suggest or disclose a fuel control system which estimates an effective fuel flow adjustment based on the estimated heat transfer between the combustion gases and the engine metal and then determines a final engine fuel demand based on the initial engine fuel demand and the estimated effective fuel flow adjustment

Therefore, it is respectfully submitted that claim 17, by virtue of its dependency from claim 12, is in condition for allowance and an action acknowledging the same is respectfully requested.

Claims 18 and 21 were rejected by the Examiner under 35 U.S.C. § 103(a) as being unpatentable over Stoltman and Hagen, as applied to claim 12 above, in further view of U.S. Patent No. 6,244,039 to Sugishita et al. Applicants note that the Sugishita et al. patent does not cure the deficiencies of Stoltman and Hagen noted above with respect to claim 12. In particular Sugishita et

al. does not disclose, suggest or teach a fuel control system that estimates during engine operation and based on the plurality of measured operating parameters, an amount of heat transferred between fuel combustion gases and engine metal. Nor does Sugishita et al. teach, suggest or disclose a fuel control system which estimates an effective fuel flow adjustment based on the estimated heat transfer between the combustion gases and the engine metal and then determines a final engine fuel demand based on the initial engine fuel demand and the estimated effective fuel flow adjustment

Therefore, it is respectfully submitted that claims 18 and 21 by virtue of their dependency from claim 12, are in condition for allowance and an action acknowledging the same is respectfully requested.

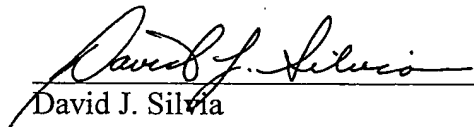
Applicants respectfully submit that all of the claims in this application, namely claims 12-21, are in condition for allowance, and such action is earnestly solicited.

If after reviewing this amendment, the Examiner believes that Applicants have not placed the application in condition for allowance, the undersigned attorney respectfully requests a telephone interview to facilitate the resolution of any remaining matters. The undersigned attorney may be contacted at the number set forth herein below.

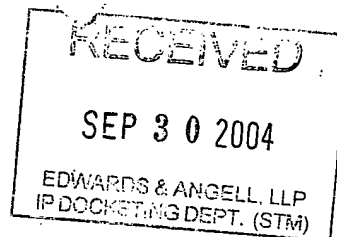
Applicants respectfully request a two-month extension of time and have enclosed a check to cover the required fee. If any additional fees are required, the Commissioner is hereby authorized and requested to charge Deposit Account No. **04-1105**.

Respectfully submitted,

September 15, 2004


David J. Silva
Attorney of Record
EDWARDS & ANGELL, LLP
Intellectual Property Practice Group
P.O. Box 9169
Boston, MA 02209
Telephone: (203) 353-6839

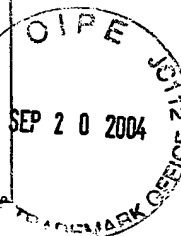
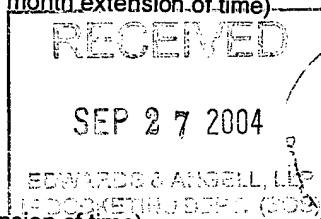
DJS



Mailing Date: Sept. 16, 2004 Attorney/Sec: David J. Silvia/es
Client: GPECS Docket No.: (49366) 58917 DIV
Inventors: Zagranski et al.
Serial No.: 10/694,973 Patent No.:
Filing Date: Oct. 28, 2003 Grant Date:

The dating stamp of the Patent and Trademark Office hereon will be taken as the date of filing of:

Combined Amendment & Petition for Extension of Time (Large Entity)
Amendment
Check in the amount of \$420.00 (2 month extension of time)
Certificate of Mailing



Due Date: September 20, 2004 (2 month extension of time)

SB



Inventor: Raymond Zagranski et al.

Atty Docket No.: 58917DIV(49366)

Application No.: 10/694,973-Conf. #4439

Filing Date: October 28, 2003

Title: FUEL CONTROL SYSTEM FOR GAS TURBINE ENGINES

Documents Filed:

Supplemental Amendment

Amendment Transmittal (1 page)

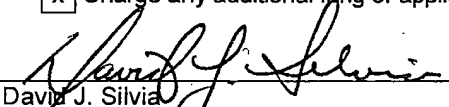
Certificate of Mailing

Via: First Class Mail

Sender's Initials: DJS/es

Date: June 22, 2005



AMENDMENT TRANSMITTAL LETTER			Docket No. 58917DIV(49366)	
Application No. 10/694,973-Conf. #4439	Filing Date October 28, 2003	Examiner D. Tran	Art Unit 3661	
Applicant(s): Raymond Zagranski et al.				
Invention: FUEL CONTROL SYSTEM FOR GAS TURBINE ENGINES				
TO THE COMMISSIONER FOR PATENTS				
Transmitted herewith is an amendment in the above-identified application.				
The fee has been calculated and is transmitted as shown below.				
CLAIMS AS AMENDED				
	Claims Remaining After Amendment	Highest Number Previously Paid	Number Extra Claims Present	Rate
Total Claims	10	- 20 =		x
Independent Claims	2	- 3 =		x
Multiple Dependent Claims (check if applicable) <input type="checkbox"/>				
Other fee (please specify):				
TOTAL ADDITIONAL FEE FOR THIS AMENDMENT:				0.00
<input checked="" type="checkbox"/> Large Entity <input type="checkbox"/> Small Entity				
<input checked="" type="checkbox"/> No additional fee is required for this amendment.				
<input type="checkbox"/> Please charge Deposit Account No. _____ in the amount of \$ _____ A duplicate copy of this sheet is enclosed.				
<input type="checkbox"/> A check in the amount of \$ _____ to cover the filing fee is enclosed.				
<input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.				
<input checked="" type="checkbox"/> The Director is hereby authorized to charge and credit Deposit Account No. <u>04-1105</u> as described below. A duplicate copy of this sheet is enclosed.				
<input checked="" type="checkbox"/> Credit any overpayment.				
<input checked="" type="checkbox"/> Charge any additional filing or application processing fees required under 37 CFR 1.16 and 1.17.				
<div style="text-align: center;"> David J. Silvia Attorney Reg. No.: 49,036 EDWARDS & ANGELL, LLP P.O. Box 55874 Boston, Massachusetts 02205 (203) 353-6839</div>			Dated: <u>June 22, 2005</u>	
<div style="border: 1px solid black; padding: 5px;"><p>I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail, in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below.</p><p>Dated: June 22, 2005 Signature: <u>Edith Sillman</u> (Edith Sillman)</p></div>				



Attorney Ref. No. 49366 58017DIV

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Zagranski, et al. Confirmation No.: 4439
U.S. Serial No. 10/694,973 Examiner: Tran, Dalena
Filed: October 28, 2003 Group Art Unit: 3661
For: **FUEL CONTROL SYSTEM FOR GAS TURBINE ENGINES**

CERTIFICATE OF MAILING

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Date: June 22, 2005

Edith D. Sillman
Edith D. Sillman

Mail Stop: Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SUPPLEMENTAL AMENDMENT

Sir:

Please enter the supplemental amendment to the specification as set forth
hereinbelow:

IN THE SPECIFICATION

After the "CROSS REFERENCE TO RELATED APPLICATIONS" section beginning on Page 1, line 3 please insert the following **new** section:

GOVERNMENT RIGHTS STATEMENT

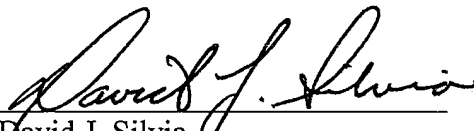
The U.S. Government has a paid-up license in this invention and the right in limited circumstances to require the patent owner to license others on reasonable terms as provided for by the terms of DAAH10-99-2-0005, awarded by the U.S. Department of the Army.

REMARKS

Applicant has amended the specification to add a Government Rights Statement which was unintentionally omitted from the application as filed.

Respectfully submitted,

June 22, 2005


David J. Silvia
Attorney of Record
EDWARDS & ANGELL, LLP
Intellectual Property Practice Group
P.O. Box 55874
Boston, MA 02205
Telephone: (203) 353-6839